

RCRA FACILITY FACT SHEET

FMC Corporation – Former Coke Plant, Kemmerer, Wyoming

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FACILITY BACKGROUND

FMC Corporation (FMC) operates a closed hazardous waste landfill containing 57,660 cubic yards of K087 hazardous waste covering approximately 4.3 acres at the former Kemmerer Coke Plant. This closed hazardous waste landfill is a RCRA regulated unit and operates under Wyoming Department of Environmental Quality (WDEQ) Permit for Hazardous Waste Management Facility – Post Closure Care and Corrective Action Permit No. WYD069811404, first issued to FMC on October 8, 1997. A renewal permit was issued in December 2005.

The Former Kemmerer Coke Plant is located on 700 acres of undeveloped land in rural Lincoln County, approximately 5 miles south of Kemmerer, Wyoming. FMC used a proprietary process to manufacture metallurgical coke from western sub-bituminous coal at the facility. The raw material (non-coking coal) and methods used in the coke production process, along with the resulting waste products, were unlike those normally associated with coke formation. During the facility's active phase, it generated 100,000 tons of coke per year for use offsite. The facility was active from 1960 until 2001.

This coke manufacturing process produced a hazardous waste, K087 decanter tank sludge, until FMC modified the process to eliminate the hazardous waste stream. K087 decanter tank sludge was historically disposed on-site in Waste Material Management Units (WMMUs). In 1988, the hazardous wastes were consolidated into a Hazardous Waste Landfill (HWL) in the southeastern portion of the property. The HWL was closed in 1989 and is currently regulated under the WDEQ Permit for a Hazardous Waste Management Facility.

In April 2000, FMC transferred its property and production assets to Astaris, LLC (Astaris) in which FMC owned 50% of the stock. Astaris operated the coke production process until 2001, when Astaris ceased operations. Astaris began demolition of the production units on July 01, 2002 and completed removal of all above grade production equipment on September 30, 2002. FMC continued to manage the closed Hazardous Waste Landfill and

was responsible for compliance associated with the Hazardous Waste Management Facility. The site is currently owned by FMC Corporation, which reassumed ownership when Astaris was purchased by Israel Chemicals Ltd.

FMC submitted an application to participate in the State of Wyoming's Voluntary Remediation Program (VRP) on March 26, 2003. The WDEQ accepted FMC into the VRP for the Former Kemmerer Coke Plant on June 13, 2003. The current VRP area encompasses 283 acres of land potentially impacted by the former coke processing and active plant areas. Excluded from the VRP are the open buffer zones of natural undisturbed space, and an industrial landfill that is administrated separately under a Solid Waste Permit. A RCRA Facility Investigation (RFI) report was submitted for the facility in April 2000 and was conditionally approved by the WDEQ in May 2007. A VRP Site Characterization Report was submitted for the site in October 2009 and was conditionally approved by the WDEQ on November 19, 2009.

The ecological and human health risk assessments were conditionally approved by the WDEQ in 2015. As of 2015, FMC and the WDEQ are working cooperatively to renew the RCRA Post-Closure Permit in a timely manner, as the permit expires in 2016. FMC and the WDEQ are also gathering the necessary information for a proposed Corrective Action Management Unit (CAMU), which would be constructed on-site for future management of remediation wastes. FMC and the WDEQ will proceed with working on the Corrective Measures Study (CMS) in 2015 and 2016.

ENVIRONMENTAL CONCERNS

Chemicals of concern have been identified in several areas around the site. Areas of contaminated soil and groundwater have been confirmed in the former process area, former tarry water pond, run-off diversion ditches and waste water pond. Possible off-site contamination has also been identified on the Chevron Mining, Inc. and Anadarko properties located east of the former plant site. The identified chemicals of concern include phenolic compounds, polynuclear aromatic hydrocarbons (PAHs), trichloroethane, catechols and select metals. FMC has completed site characterization activities and has demonstrated compliance with the post closure and corrective action requirements specified in the Permit. FMC has also completed the ecological and human health risk assessments, which concluded that risks exist at the site as a result of on-site releases, and warrant mitigation and management.

CORRECTIVE ACTION OVERVIEW

Investigative and remedial efforts at the site have been conducted pursuant to both the State of Wyoming's VRP and RCRA. The chronology of these efforts is summarized as follows:

1960 – FMC began using a proprietary process to manufacture metallurgical coke from western sub-bituminous coal at the Former Kemmerer Coke Plant. The process produced a hazardous waste, K087 decanter tank sludge, which was collected in the tarry water pond for evaporation.

1984 – FMC altered the manufacturing process to eliminate the generation of K087 hazardous waste and proceeded with plans to close the upper and lower tar pits and the tarry water pond under RCRA interim-status guidelines (40 CFR 265, Subpart G).

1985 – A closure plan for the tarry water pond and tar pits was submitted for review to EPA Region VIII.

1987 – EPA modified and approved FMC closure plan. FMC completed the initial design for the construction of the Hazardous Waste Management Unit (HWMU).

1988-1989 – Closure activities for the tar pits and tarry water pond were completed and closure was certified by the resident engineer and independent professional engineer on December 04, 1989.

1992 – EPA Permit, ID No: WYD069811404 - Post Closure and Corrective Action Permit issued to FMC for a Hazardous Waste Management Facility.

1993 – EPA Permit, ID No: WYD069811404 issued to FMC for a Hazardous Waste Management Facility. Issuance of the 1993 Permit supersedes EPA Permit.

2000 – Draft Final RFI Report submitted to the WDEQ for WMMU 8, WMMU 9 and WMMU 10.

2003 – EPA Post Closure and Corrective Action Permit expires.

2004 – Permit Application for the Hazardous Waste Management Facility, Post Closure and Corrective Action submitted January 2004.

2005 – WDEQ Permit Reissuance for the Hazardous Waste Management Facility, Post Closure Care and Corrective Action. Includes provisions with the VRP program and the preliminary Remediation Agreement (PRA).

2005 – VRP Phase I Technical Memorandum received at the WDEQ.

2006 – Phase II Technical Memorandum submitted to the WDEQ for site investigation around the former process area and potential off site contamination.

April 2006 – Draft CAMU Application submitted to the WDEQ.

February 2007 – 2006 Annual Groundwater Report received at the WDEQ.

May 2007 – Off-site soil investigation was completed on May 11, 2008.

May 2007 – WDEQ Conditional Approval of the March 2000 RFI Report.

May 24, 2007 – WDEQ review comments for the Phase 2 Tech Memo Review Comments.

August 2007 – FMC submits Work Plan addressing proposed changes to groundwater monitoring for the fall 2007 monitoring event.

August 2007 – FMC submits Work Plan to investigate TCE contaminated groundwater under the former process area.

October 2007 – Off-site soil investigations in Section 7 and TCE source area investigation.

January 2008 – Draft 2007 RCRA Annual Groundwater Report received. WDEQ review comments mailed on March 18, 2008.

May 2008 – The public hearing for the Use Control Area (UCA) designation was completed. The UCA was enacted by the Lincoln County commissioners at the May 07, 2008 public hearing.

December 2008 – Draft VRP Risk Assessment Work Plan received. WDEQ review comments mailed on October 22, 2010.

February 2009 – Draft 2008 RCRA Annual Groundwater Report received. WDEQ review comments mailed on April 16, 2009.

October 2009 – Draft Final Site Characterization Report was received. The WDEQ conditionally approved the report on November 19, 2009.

January 2010 – Draft 2009 RCRA Annual Groundwater Report received. WDEQ review comments mailed on July 1, 2010.

September 2010 – Revised Final Work Plan for Installation and Sampling of Additional Groundwater Monitoring Wells received. WDEQ approved the report on October 7, 2010.

December 2010 – Draft Final 2010 Monitoring Well Completion Report submitted to WDEQ. An Aquifer and Lithological Evaluation was also submitted in May 2011. WDEQ mailed comments for both reports on June 16, 2011.

March 2011 – Draft 2010 RCRA Annual Groundwater Report received. WDEQ review comments mailed on June 16, 2011.

December 2011 – Documentation of 2011 Well Development Activities received. WDEQ approved the report on January 17, 2012.

March 2012 – Revision 1 Addendum to Groundwater Monitoring Plan. WDEQ approved the Addendum on March 27, 2012.

June 2012 – Work Plan for 2012 Groundwater Monitoring Well Activities received. WDEQ approved the report on August 3, 2012.

August 2012 – Work Plan for Field Ecological Survey received. WDEQ approved the report on August 30, 2012.

November 2013 – Risk Assessment Work Plan received June 2013. WDEQ conditionally approved the work plan in November 2013.

February 2014 – RCRA 2013 Annual Groundwater Monitoring Report received. WDEQ conditionally approved the report on May 28, 2014.

July 2014 – Ecological Field Survey received. WDEQ approved the survey on July 8, 2014.

November 2014 – Contaminants of Interest and Contaminants of Potential Ecological Concern and Toxicity Report for the Human Health and Ecological Risk Assessment Report received October 2015. The WDEQ provided comments on the report in November 2014. The WDEQ's comments were incorporated into the final Human Health and Ecological Risk Assessment submitted in May 2015 (below).

July 2015 – Human Health and Ecological Risk Assessment received May 2015. The WDEQ conditionally approved the report on July 10, 2015.

PATH FORWARD TO MEETING EPA'S 2020 CORRECTIVE ACTION GOALS

The FMC Former Kemmerer Coke Plant is located approximately 3 miles from the closest residential area (Diamondville/Kemmerer, WY). The site borders lands owned by Chevron Mining, Inc., Anadarko, and Lincoln County, WY, and is kitty-corner to lands owned by the Bureau of Land Management.

FMC has conducted a site-wide risk assessment in accordance with the approved work plan, and the WDEQ will use the results of the Risk Assessment to determine site-specific cleanup levels for soils (groundwater will be remediated meet to federal and state promulgated cleanup levels). Soil excavation will likely be a necessary component of the site-wide remedy. Therefore, FMC will submit a CAMU application after completion of the Risk Assessment, when it is possible to compare soil data to site-specific cleanup levels and more accurately estimate the volume of soil targeted for excavation.

In 2015 and 2016, FMC will prepare a Remedial Alternatives Evaluation (RAE) report through the VRP, which will fulfill the RCRA requirement for a Corrective Measures Study (CMS). The WDEQ and FMC will use the RAE to determine an appropriate remedy for the site, which will be enforced through a Remedy Agreement. The Remedy Agreement will be subject to public notice and will trigger a modification of FMC's current Post-Closure Care and Corrective Action Permit (No. WYD069811404). FMC will

conduct remedy implementation activities in accordance with the Remedy Agreement and the WDEQ expects the site-wide remedy to be constructed by 2020.

FOR MORE INFORMATION

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